ON THE EXTENSOR PROPRIUS INDICIS DIGITI, AND ITS VARIATIONS IN MAN AND THE MAMMALIA.

The most extensive and trustworthy series of statistics relating to human myology contained in anatomical literature are those which have been collected by **PROFESSOR GRUBER** during his long period of active labor at the head of the Anatomical Institute of the Medical Academy of St. Petersburg, and which, from the number of subjects examined, and from the care with which the observations are made and recorded, may claim to be accepted as decisive of the normal condition and the frequency of occurrence of the commoner forms of variation in the several muscles examined. During the last few years Professor Gruber has made a special study of the musculature of the forearm, and his results concerning the extensor minimi digiti and the slip of the extensor carpi ulnaris, known as the ulnaris digiti quinti in man and mammals, have been published in Parts III. and V. of the *Beobachtungen aus der menschlichen und vergleichenden Anatomie.* In Part VI. he discusses in a similar manner the extensor indicis muscle, giving the results of his observations upon 600 subjects, or 1200 arms, dissected by himself, in the course of the years 1881–1884.

In all, 23 variants (1 normal and 22 abnormal forms) are recognized, 20 of which have at various times come under the notice of the author, the remaining 3 being known only from a single case of each recorded by other anatomists. In the 1200 limbs some form of variety was met with in nearly 22 per cent., the commonest being an accessory portion of the muscle going to the middle finger (extensor digiti indicis et medii), in 14 per cent.; and a splitting of the belly and tendon in nearly 3 per cent., or of the tendon only in 2 per cent. The rarer abnormalities of the muscle include a special sheath in the posterior annular ligament for the tendon in 7 arms, absence of the muscle in 6 cases (in one of these a short extensor indicis arising from the back of the carpus, and in another a short extensor indicis et medii from the lower end of the radius). An accessory head arising in the neighborhood of the back of the wrist in 4 arms, an extra slip passing to the thumb and index-finger (one form of extensor pollicis et indicis), a slip to the thumb (Gruber's extensor indicis et pollicis singularis), 2 extra slips, 1 passing to the thumb and 1 to the middle finger (extensor pollicis, indicis et medii), additional bellies to the middle and ring fingers (extensor digiti indicis, medii et annularis), or to the middle and little fingers (extensor digiti indicis, medii et auricularis), and lastly an extra belly to the ring finger alone (extensor indicis et annularis).

A supernumerary extensor indicis confined to the hand was seen in 13 cases; in 11 it arose from the base of the second metacarpal bone or exceptionally from the trapezium, and ended at the base of the first phalanx of the forefinger; in 2 it arose from the floor of the fourth compartment in the posterior annular ligament, and ended by joining the normal extensor tendon of the index. The various forms are fully and precisely described in the original, and figured in excellent plates.

The second section of the work is an exhaustive account of the comparative anatomy of the muscle in its various forms among mammalia; and it is shown that, apart from the mere splitting of the muscle and the rare varieties of which only a single specimen is recorded, nearly all the varieties that the author has met with in man occur more or less constantly in different animals. Of the anthropoids, the gorilla has, as a rule, a simple extensor indicis proprius; the chimpanzee sometimes an extensor indicis proprius and sometimes an extensor indicis et medii; the orang usually an extensor indicis et medii; and hylobates most frequently an extensor indicis, medii et annularis, but sometimes a simple extensor indicis.

It is impossible here to follow the author through his review of the muscle in the other mammalian groups, but the following forms may be mentioned as corresponding to some of the varieties of the human muscle not represented among the anthropoids. Thus, an extensor pollicis et indicis united with the extensor indicis proprius, there being, however, no special long extensor of the pollex, is present in Felis domestica (compare Gruber, in *Virchow's Archiv*, lxxxvi. 483); and extensor indicis et pollicis singularis in Dasypus; an extensor pollicis, indicis et medii, but with absence of extensor secundi internodii pollicis, in Hapale, Solenodon, and Didelphis; while the short accessory extensor indicis or extensor indicis et medii has its homologue in the extensor brevis digitorum manus of many edentates—*e. g.*, Manis, Alyrunecophega, Bradypus, Cholœpus.

THE VEINS OF THE SPINE.

C. WALTER (*Recherches Anatomiques sur les Veines du Rachis;* thesis presented to the Faculty of Medicine of Paris, March, 1885) does not add much to the classical description of the veins of the spine by Breschet, so far as the dorsal and lumbar regions are concerned, but in the neck his researches supplement and correct the accounts generally given in anatomical text-books in several particulars. He describes the basivertebral veins, the anterior longitudinal spinal plexuses, the posterior spinal plexus, and the dorsal spinal veins in the usual way. The communicating branches between the anterior and posterior spinal veins form rings around the nerves where they enter the intervertebral foramina, and from each ring a thick plexus is continued outward surrounding the nerve as it traverses the foramen. A finer *periganglionic plexus* is closely adherent to the fibrous sheath of the nerve, and into this the veins of the dura mater and the spinal cord empty themselves. Another ring is formed by the perispinal veins at the outer side of the foramen, and this constitutes the external limit of the main plexus.

In the cervical region the anterior and posterior longitudinal veins of the same side approach one another, and eventually unite in a large plexus situated in the lateral angle of the canal, occupying from one-fourth to one-third of its cavity, and being perforated by narrow openings through which the nerve roots pass. This plexus becomes more expanded opposite the atlas, and the author gives the name of *occipito-vertebral confluence* to the dense venous mass surrounding the dura mater in the neighborhood of that bone. From the confluence the perispinal venous trunks of the neck mainly take their origin, by means of a large prolongation accompanying the vertebral artery above the atlas and a smaller one below. Some smaller veins ascend from the confluence and partly enter the anterior condylar foramen, partly join the circular plexus at the margin of the foramen magnum and its continuation over the basilar process.